

Docket No.: 57454-329

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :
:
Masahiro SHIMIZU, et al. :
:
Serial No.: Divisional of : Group Art Unit: To be assigned
Appln. Serial No. 09/452,099 :
:
Filed: January 24, 2002 : Examiner: To be assigned
:
For: SEMICONDUCTOR DEVICE

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Sir:

Prior to examination of the above-referenced application, please amend the application as follows:

IN THE TITLE:

Please change the title from "SEMICONDUCTOR DEVICE" to --INTEGRATED
CIRCUIT HAVING A MEMORY CELL TRANSISTOR WITH A GATE OXIDE LAYER
WHICH IS THICKER THAN THE GATE OXIDE LAYER OF A PERIPHERAL CIRCUIT
TRANSISTOR--

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IN THE SPECIFICATION:

On page 1, after the title, please insert the following:

--This application is a divisional of U.S. Patent Application Serial No. 09/452,099, filed

December 2, 1999, which is a divisional of U.S. Patent Application Serial No. 09/119,053, filed July 20, 1998, now U.S. Patent 6,066,881.--.

Page 3, line 10, please delete "23a" and replace it with --23b--.

Page 19, line 9, please delete "9" and replace it with --8--.

Page 24, line 16, please delete "13A and 13B" and replace it with --13--.

IN THE CLAIMS:

Please cancel all claims from the application and replace by the following new claims:

--12. A method of manufacturing a semiconductor device, comprising the steps of:

forming first and second gate electrodes of first and second transistors on a main surface of a semiconductor substrate with a space between each other;

forming a nitride film covering said first and second gate electrodes;

forming source/drains of said first and second transistors;

forming an interlayer insulating film covering said nitride film;

forming in said interlayer insulating film a first contact hole reaching one of said source/drain of said first transistor;

providing a second contact hole formed in said interlayer insulating film and reaching one of said source/drain of said second transistor and a third contact hole penetrating said interlayer insulating film and said nitride film reaching said second gate electrode; and

forming a bit line connected via said first contact hole to one of said source/drain of said

first transistor, and first and second interconnections extending in said second and third contact holes.

13. The method according to claim 12, said source/drain of said second transistor having a highly doped region, wherein:

the step of forming said source/drain of said second transistor includes the step of forming first metal silicide at a surface of said heavily doped region; and

the step of forming said bit line includes the steps of: forming a plug electrode in said first contact hole; forming second metal silicide at a surface of said plug electrode; and forming said bit line on said second metal silicide.

14. A method of manufacturing a semiconductor device, comprising the steps of:

forming first and second gate electrodes of first and second transistors on a main surface of a semiconductor substrate with a space between each other;

forming a nitride film covering side walls of said first and second gate electrodes;

forming first impurity regions at opposite sides of said first and second gate electrodes;

forming an interlayer insulating film covering said first and second gate electrodes;

forming in said interlayer insulating film a contact hole reaching one of said first impurity regions of said first transistor and said nitride film;

introducing impurity into said semiconductor substrate through said contact hole to form a second impurity region overlapping with said one of said first impurity regions of said first

transistor and having a high concentration than said first impurity region; and

forming a storage node electrically connected to said second impurity region through said contact hole.--.

REMARKS

The above preliminary amendment is necessary to add new claims and to incorporate the data about parent applications and the amendments that were made in parent application Serial No. 09/119,053. Entry of the preliminary amendment is respectfully requested.

Respectfully submitted,

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